

AMENDMENTS TO THE CLAIMS:

1. (Currently Amended) Device for measuring or evaluating the relative position of two elements with respect to each other, comprising:

- a light source means for producing at least one light beam connected to a first of the two elements;

- a first two-dimensionally readable optoelectronic sensor and at least one second two-dimensionally readable optoelectronic sensor connected to a second of the two elements each of which are in a relative alignment with respect to each other such that a portion of said at least one light beam incident on a surface of an optoelectronically active layer of the first optoelectronic sensor is ~~proportionally~~ reflected by the surface of the optoelectronically active layer directly as a light beam onto a surface of the at least one second two-dimensionally readable optoelectronic sensor;

- electronic means for receiving output signals from each of the optoelectronic sensors, processing the signals, and computing the relative position of the light source means relative to the incidences of the at least one light beam on the surfaces of the two-dimensionally readable optoelectronic sensors.

2. (Currently Amended) Device for measuring or evaluating the relative position of two elements with respect to each other, comprising:

- a light source for producing at least one light beam along a beam path connected to a first of the two elements;

- a first two-dimensionally readable optoelectronic sensor and a second two-dimensionally readable optoelectronic sensor each connected to a second of the two elements;

- a transmitting mirror located in the beam path in front of the first optoelectronic sensor which can be read out two-dimensionally, the ~~transmitting~~

mirror and the sensors being in a relative alignment with respect to each other such that a portion of the at least one light beam incident on a surface of an optoelectronically active layer of the first optoelectronic sensor is ~~proportionally~~ reflected, via the ~~transmitting~~ mirror, directly as a light beam onto a surface of the second two-dimensionally readable optoelectronic sensor;

- electronic means for receiving output signals from the optoelectronic sensors, processing the signals, and computing the relative position of the at least one light beam relative to the first two-dimensionally readable optoelectronic sensor.

3. (Currently Amended) Device for measuring or evaluating the relative position of two elements with respect to each other, comprising:

- a light source for producing at least one light beam connected to a first of the two elements;

- a first two-dimensionally readable optoelectronic sensor and at least one second two-dimensionally readable optoelectronic sensor;

- a housing, connected to a second of the two elements, in which the first and second two-dimensionally readable optoelectronic sensors are positioned relative to one another such that a portion of the light beam incident on first two-dimensionally readable optoelectronic sensor is ~~proportionally~~ reflected as a plurality of light beams in a folded beam path by a surface of an optoelectronically active layer of the first optoelectronic sensor onto the second two-dimensionally readable optoelectronic sensor;

- electronic means for receiving output signals from the optoelectronic sensors, processing the signals, and computing the relative position of the housing relative to the incidences of the at least one masked light beam on the surfaces of the two-dimensionally readable optoelectronic sensors.

4. (New) Device for measuring or evaluating the relative position of two elements with respect to each other, comprising:

- a light source means for producing at least one light beam;
- a first two-dimensionally readable optoelectronic sensor;
- at least one second two-dimensionally readable optoelectronic sensor in a relative alignment with respect to the first two-dimensionally readable optoelectronic sensor such that the light beam from the light source means is incident on a surface of an optoelectronically active layer of the first two-dimensionally readable optoelectronic sensor and a portion of the light beam is ~~proportionally~~ reflected by the surface of the optoelectronically active layer directly as a light beam onto a surface of the at least one second two-dimensionally readable optoelectronic sensor;
- electronic means for receiving output signals from each of the optoelectronic sensors, processing the signals, and computing the relative position of the light source means relative to the incidences of the at least one light beam on the surfaces of the two-dimensionally readable optoelectronic sensors.